

Mathematics, Grades 4, 8, and 11

Chart 1: 4, 8, 11 M

The chart below shows the National Percentile Ranks for grades 4, 8, and 11

- In 2001, grade 4 scored an NPR of 62%, grade 8 an NPR of 57%, and grade 11 an NPR of 61%.
- In 2007, NPR scores for grades 4 and 8 were higher than in 2001 and grade 11 scored the same as in 2001.

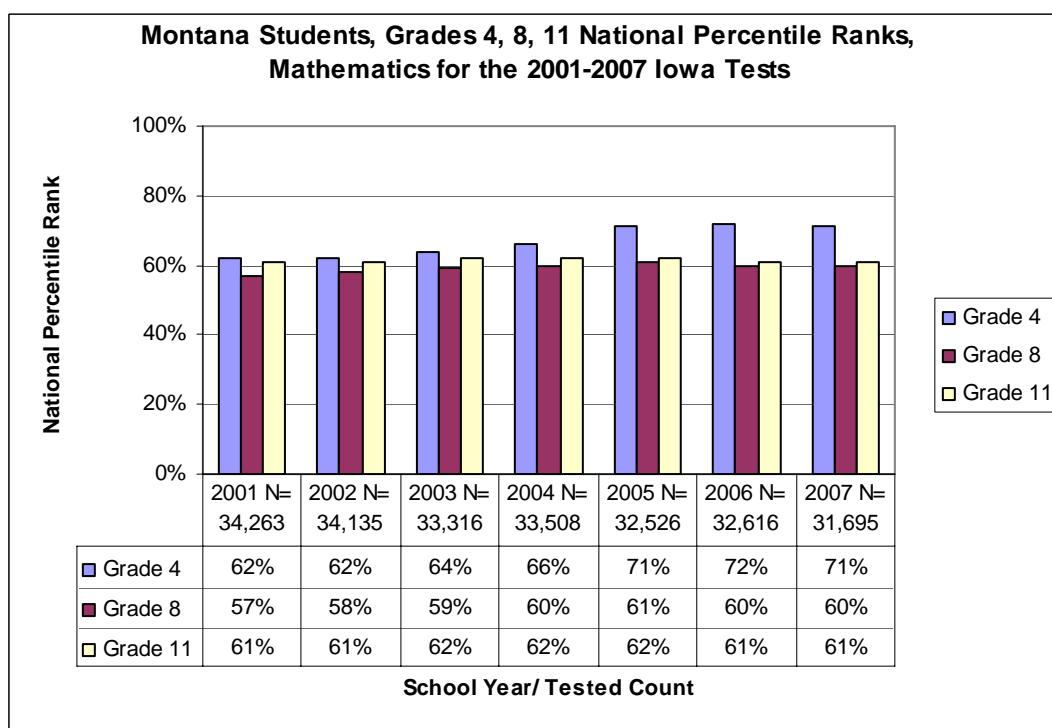


Table 1: 4, 8, 11 M

Math National Percentile Rank for each disaggregation across Montana in 2001-2007.

Groups	Grade 4							Grade 8							Grade 11						
	2001	2002	2003	2004	2005	2006	2007	2001	2002	2003	2004	2005	2006	2007	2001	2002	2003	2004	2005	2006	2007
All Students	62%	62%	64%	66%	71%	72%	71%	57%	58%	59%	60%	61%	60%	60%	61%	61%	62%	62%	62%	61%	61%
Students Without Disabilities	66%	65%	67%	69%	74%	75%	74%	60%	62%	63%	64%	64%	64%	64%	64%	64%	65%	65%	65%	65%	65%
Students With Disabilities	31%	31%	35%	40%	46%	43%	42%	25%	23%	24%	27%	28%	25%	24%	26%	26%	28%	26%	25%	27%	27%
Female Students	60%	61%	63%	65%	70%	71%	71%	58%	59%	60%	60%	62%	61%	61%	60%	61%	62%	61%	62%	61%	60%
Male Students	62%	63%	64%	67%	72%	73%	72%	57%	57%	58%	60%	60%	59%	59%	62%	62%	63%	63%	62%	61%	63%
Native American Students	40%	40%	41%	46%	52%	53%	51%	33%	32%	36%	37%	38%	37%	39%	41%	39%	40%	39%	39%	41%	41%
White Students	66%	65%	67%	69%	74%	74%	74%	60%	62%	63%	63%	64%	63%	63%	63%	63%	65%	64%	64%	64%	64%
Students on Free/Reduced Lunch	51%	50%	53%	55%	62%	61%	60%	45%	45%	45%	48%	48%	47%	48%	49%	48%	50%	48%	49%	49%	49%
LEP*	NA	29%	29%	37%	37%	40%	38%	NA	24%	21%	26%	25%	28%	27%	NA	34%	36%	32%	34%	32%	30%

*LEP 2001 data were incomplete.

Table 2: 4, 8, 11 M

Math: The table below shows the percentage of students for each disaggregation scoring in each performance category in grades 4, 8, and 11 for 2001-2007.

Groups/Year		Grade 4				Grade 8				Grade 11			
		Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3
All Students	2001	14%	59%	14%	12%	15%	54%	15%	16%	17%	59%	12%	12%
	2002	14%	58%	15%	13%	14%	54%	15%	17%	17%	59%	12%	12%
	2003	16%	59%	13%	12%	15%	55%	14%	16%	17%	60%	12%	11%
	2004	18%	60%	13%	10%	15%	56%	15%	15%	17%	58%	12%	13%
	2005	22%	57%	12%	9%	16%	55%	14%	15%	17%	59%	12%	13%
	2006	23%	56%	11%	9%	16%	54%	14%	16%	17%	57%	13%	13%
	2007	23%	55%	12%	10%	16%	54%	14%	16%	17%	58%	13%	13%
Students Without Disabilities	2001	16%	61%	13%	9%	16%	57%	15%	12%	18%	62%	11%	9%
	2002	16%	61%	13%	10%	16%	58%	14%	12%	18%	62%	11%	9%
	2003	17%	62%	12%	9%	16%	58%	14%	12%	18%	63%	11%	8%
	2004	19%	62%	12%	7%	17%	60%	14%	10%	19%	61%	11%	9%
	2005	24%	59%	11%	6%	18%	59%	13%	11%	18%	62%	11%	9%
	2006	26%	58%	10%	6%	18%	59%	13%	10%	19%	61%	12%	9%
	2007	26%	57%	10%	7%	18%	58%	13%	11%	18%	61%	11%	9%
Students With Disabilities	2001	2%	34%	22%	42%	1%	19%	21%	59%	1%	23%	25%	52%
	2002	3%	31%	22%	44%	1%	19%	22%	58%	1%	22%	23%	54%
	2003	4%	36%	22%	38%	1%	22%	21%	56%	2%	25%	22%	51%
	2004	6%	40%	23%	32%	2%	23%	23%	53%	1%	24%	22%	53%
	2005	8%	45%	19%	29%	2%	26%	21%	51%	1%	22%	24%	53%
	2006	6%	39%	20%	34%	1%	21%	22%	56%	1%	22%	24%	52%
	2007	6%	38%	20%	36%	1%	20%	22%	57%	1%	23%	26%	50%
Female Students	2001	13%	60%	15%	12%	13%	57%	16%	14%	15%	63%	12%	10%
	2002	13%	59%	15%	13%	13%	58%	15%	14%	14%	61%	14%	11%
	2003	14%	61%	13%	11%	14%	58%	14%	14%	14%	64%	12%	10%
	2004	16%	61%	14%	10%	14%	59%	14%	13%	14%	61%	13%	12%
	2005	20%	59%	13%	8%	15%	59%	14%	13%	15%	62%	12%	11%
	2006	22%	58%	12%	9%	14%	58%	15%	13%	15%	61%	13%	11%
	2007	22%	57%	11%	10%	15%	57%	15%	13%	14%	62%	13%	12%
Male Students	2001	16%	58%	14%	13%	16%	50%	15%	19%	20%	56%	11%	13%
	2002	16%	57%	13%	14%	15%	51%	15%	19%	19%	56%	12%	13%
	2003	17%	57%	14%	12%	15%	51%	15%	19%	20%	57%	11%	13%
	2004	19%	58%	12%	10%	16%	52%	15%	16%	20%	55%	11%	14%
	2005	24%	56%	11%	9%	17%	52%	14%	17%	19%	55%	12%	14%
	2006	25%	55%	11%	10%	17%	51%	14%	18%	19%	54%	12%	14%
	2007	25%	53%	12%	11%	17%	50%	14%	19%	20%	54%	12%	13%

Groups/Year		Grade 4				Grade 8				Grade 11			
		Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3
American Indian Students	2001	4%	43%	23%	29%	3%	32%	21%	44%	5%	43%	19%	33%
	2002	4%	42%	23%	31%	2%	31%	21%	46%	4%	41%	22%	33%
	2003	5%	44%	21%	29%	5%	34%	23%	38%	4%	42%	21%	32%
	2004	7%	48%	21%	25%	3%	38%	22%	36%	4%	42%	20%	34%
	2005	8%	51%	20%	21%	5%	37%	21%	37%	4%	41%	21%	34%
	2006	9%	50%	19%	21%	4%	37%	21%	38%	5%	43%	22%	31%
	2007	9%	48%	19%	24%	4%	40%	20%	36%	3%	45%	22%	30%
White Students	2001	16%	61%	13%	10%	16%	57%	14%	12%	19%	61%	11%	10%
	2002	16%	61%	13%	10%	16%	57%	15%	12%	18%	60%	12%	10%
	2003	17%	61%	12%	9%	16%	58%	13%	13%	18%	62%	11%	9%
	2004	19%	61%	12%	8%	17%	58%	14%	11%	19%	60%	11%	10%
	2005	24%	58%	11%	7%	18%	58%	13%	12%	19%	60%	11%	10%
	2006	26%	57%	10%	8%	18%	57%	13%	13%	18%	59%	12%	11%
	2007	26%	56%	10%	8%	18%	56%	13%	13%	18%	60%	12%	10%
Students on Free/ Reduced Lunch	2001	7%	55%	18%	20%	7%	44%	20%	30%	9%	51%	17%	23%
	2002	7%	52%	19%	22%	7%	44%	19%	30%	8%	51%	18%	23%
	2003	9%	55%	18%	19%	7%	45%	19%	28%	8%	53%	18%	21%
	2004	10%	56%	18%	17%	7%	47%	21%	25%	8%	49%	18%	24%
	2005	13%	57%	16%	14%	7%	47%	20%	26%	9%	51%	18%	22%
	2006	13%	56%	15%	15%	8%	46%	19%	28%	9%	49%	18%	23%
	2007	13%	54%	16%	17%	7%	47%	19%	27%	8%	51%	18%	23%
LEP*	2001	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	2002	2%	28%	25%	45%	2%	20%	20%	58%	5%	30%	22%	43%
	2003	2%	30%	23%	45%	1%	16%	22%	61%	7%	30%	24%	39%
	2004	3%	41%	25%	31%	2%	22%	22%	54%	1%	33%	22%	44%
	2005	3%	38%	26%	34%	1%	22%	23%	55%	4%	29%	26%	41%
	2006	5%	41%	20%	34%	2%	25%	22%	50%	3%	30%	24%	43%
	2007	5%	38%	26%	31%	1%	25%	25%	50%	3%	27%	25%	45%

*LEP 2001 data were incomplete.

Table 3: 4, 8, 11 M

Customized Skills Reports: Montana Mathematics standards tested in the 2001-2007 Iowa Tests

	Standard	Use math processes to solve problems, estimate and communicate		Use numbers and operations	Use algebraic concepts, processes and language	Understand shape and use geometry	Understand and use measurement attributes and processes	Use data analysis, probability and statistics.	Use patterns, relations and functions.
Grade 4	# of Items		29	67	10	7*	9*	16*	NA
	Percent Correct	01	64%	64%	72%	66%	52%	63%	NA
		02	64%	64%	72%	67%	51%	63%	NA
		03	65%	65%	73%	68%	52%	64%	NA
		04	66%	66%	75%	70%	53%	65%	NA
		05	67%	68%	77%	78%	57%	69%	NA
		06	67%	69%	78%	77%	58%	69%	NA
		07	67%	68%	78%	77%	58%	68%	NA
Grade 8	# of Items		42	81	18	7*	13*	19	4*
	Percent Correct	01	57%	53%	58%	53%	55%	68%	64%
		02	56%	53%	58%	53%	55%	67%	64%
		03	56%	54%	58%	54%	54%	68%	65%
		04	57%	54%	59%	53%	54%	69%	66%
		05	57%	55%	59%	58%	55%	69%	68%
		06	57%	54%	60%	57%	55%	69%	69%
		07	57%	54%	60%	59%	55%	70%	70%
Grade 11	# of Items		29	46*	15*	NA	7*	5*	5*
	Percent Correct	01	55%	56%	56%	NA	46%	62%	53%
		02	55%	56%	56%	NA	45%	62%	54%
		03	55%	57%	57%	NA	47%	62%	55%
		04	55%	57%	57%	NA	46%	61%	54%
		05	54%	57%	57%	NA	46%	62%	54%
		06	54%	57%	57%	NA	45%	61%	54%
		07	54%	57%	57%	NA	45%	61%	53%

• The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.

Tables 4a and 4b: 11 M

ACT Mathematics results for high school graduating classes of 2001-2007.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score American Indian Montana
2001	20.7	21.3	21.6	17.1
2002	20.6	21.4	21.45	17.65
2003	20.6	21.4	21.7	17.1
2004	20.7	21.4	21.8	17.0
2005	20.7	21.5	21.9	16.9
2006	20.9	21.8	21.9	17.4
2007	21.0	21.7	21.9	18.0

Number of Montana students in the 2001-2007 graduating classes participating in the ACT

	Total Montana Students	White Montana	American Indian Montana
2001	6,641	5,699	319
2002	6,368	5,460	300
2003	6,470	5,514	282
2004	6,255	5,259	300
2005	6,178	5,154	312
2006	6,033	4,896	269
2007	6,066	4,812	286

Tables 5a and 5b: 11 M

SAT Mathematics results for the high school graduating classes of 2001-2007.

	Average Score All National	Average Score All Montana	Average Score White Montana	Average Score American Indian Montana
2001	514	539	541	468
2002	516	547	549	500
2003	519	543	545	473
2004	518	539	538	492
2005	520	540	541	502
2006	514	552	551	508
2007	509	548	549	508

Number of Montana students in the high school graduating classes of 2001-2007 participating in the SAT.

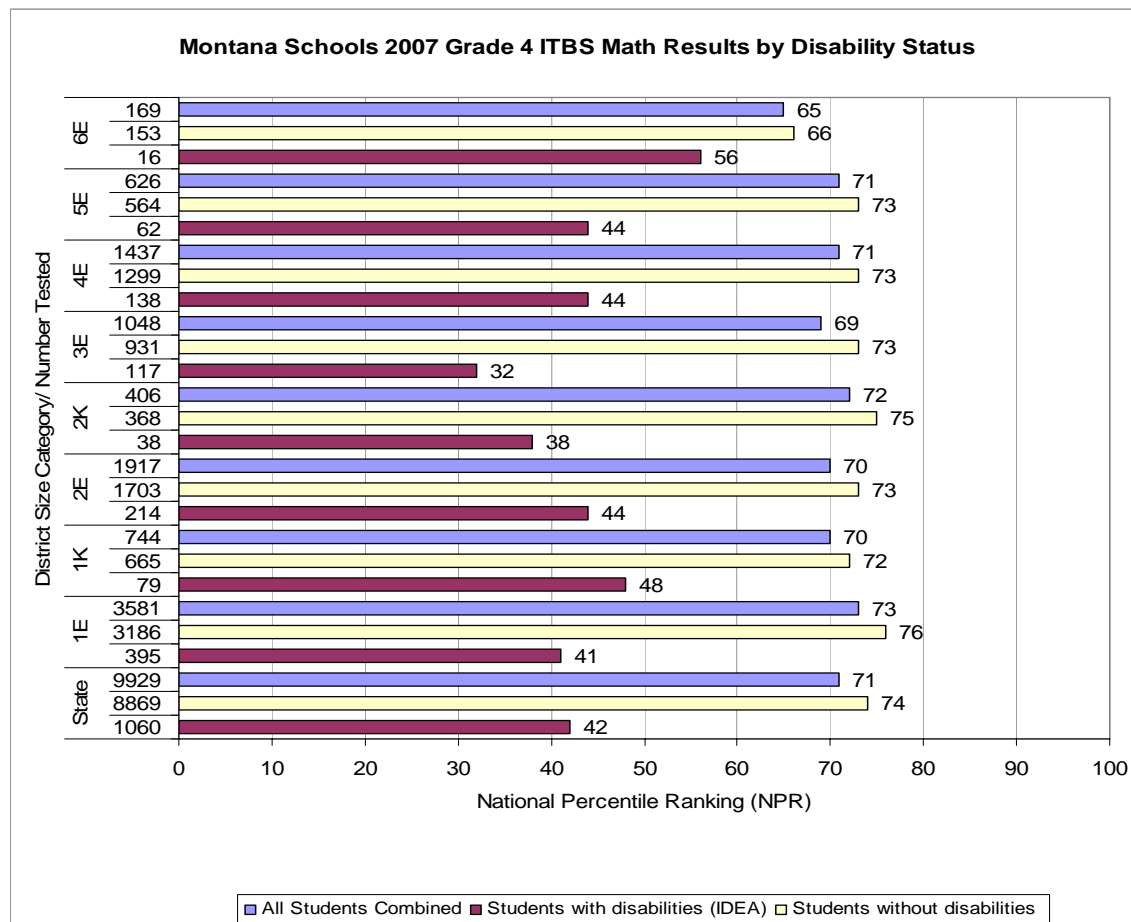
	Total Montana Students	White Montana	American Indian Montana
2001	2,762	2,342	39
2002	2,870	2,314	47
2003	3,207	2,375	43
2004	3,321	2,808	45
2005	3,326	2,818	43
2006	3,024	2,595	33
2007	2,458	2,120	47

Table 6: 4, 8, 11 M

NAEP data from 1996, 2000, 2003 and 2005 are included to add to the picture of student achievement in Math. Although NAEP data gives another perspective to the picture of Montana students tested in these years, it is not a statewide assessment, but rather a representative random sampling of the students in 4th and 8th grades in the years identified. Beginning in 2003, NAEP tests in Math in grades 4 and 8 are given in odd-numbered years.

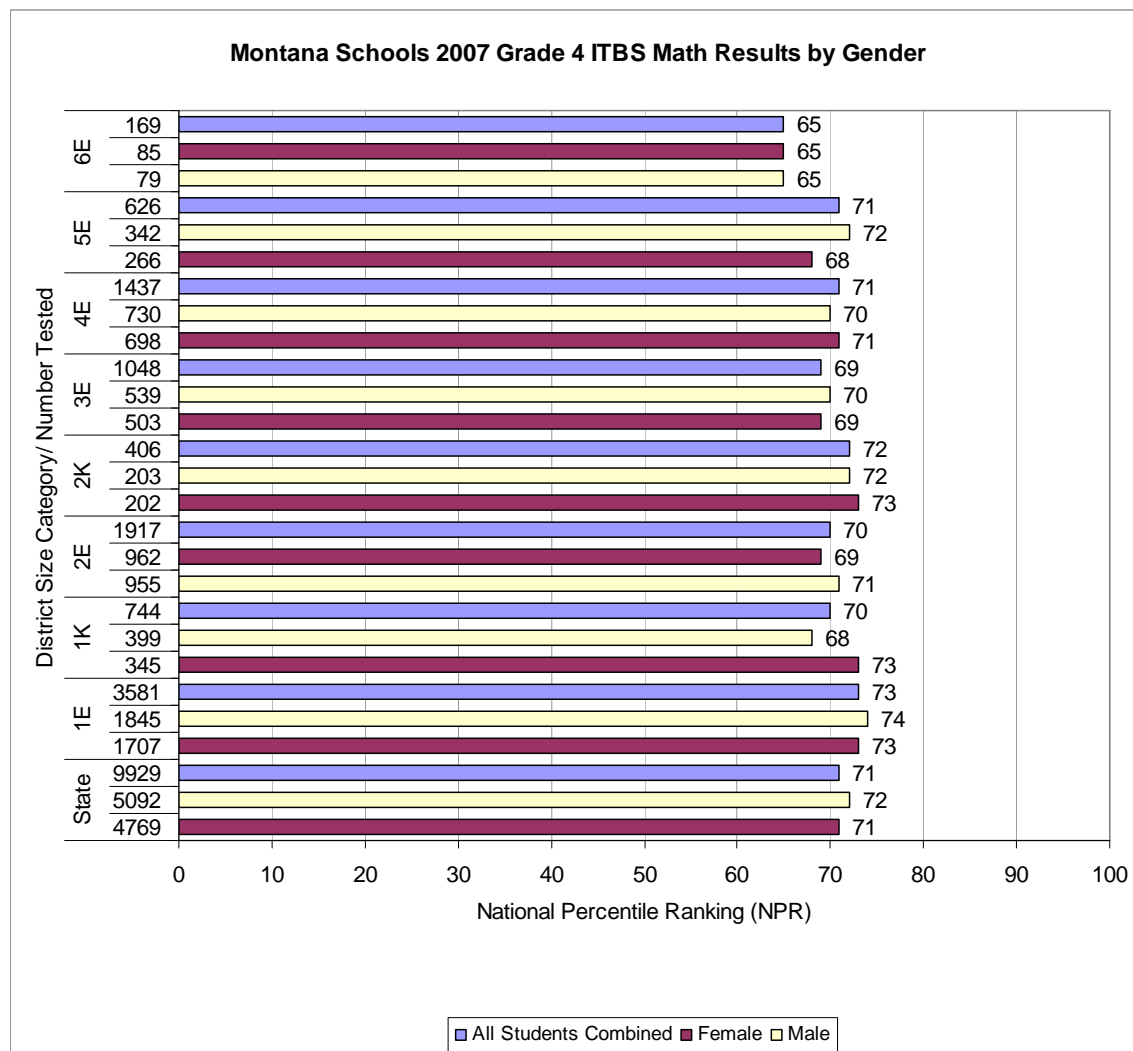
	Average Score					
Grade:Year	All National	White National	American Indian National	All Montana	White Montana	American Indian Montana
4: 1996	224	232	216	228	231	209
4: 2000	228	236	216	230	234	212
4: 2003	234	243	224	236	238	217
4: 2005	237	246	227	241	243	223
8: 1996	272	282	264	283	287	265
8: 2000	275	286	255	287	290	253
8: 2003	276	287	265	286	289	260
8: 2005	278	288	266	286	290	259

Chart 4.1 M



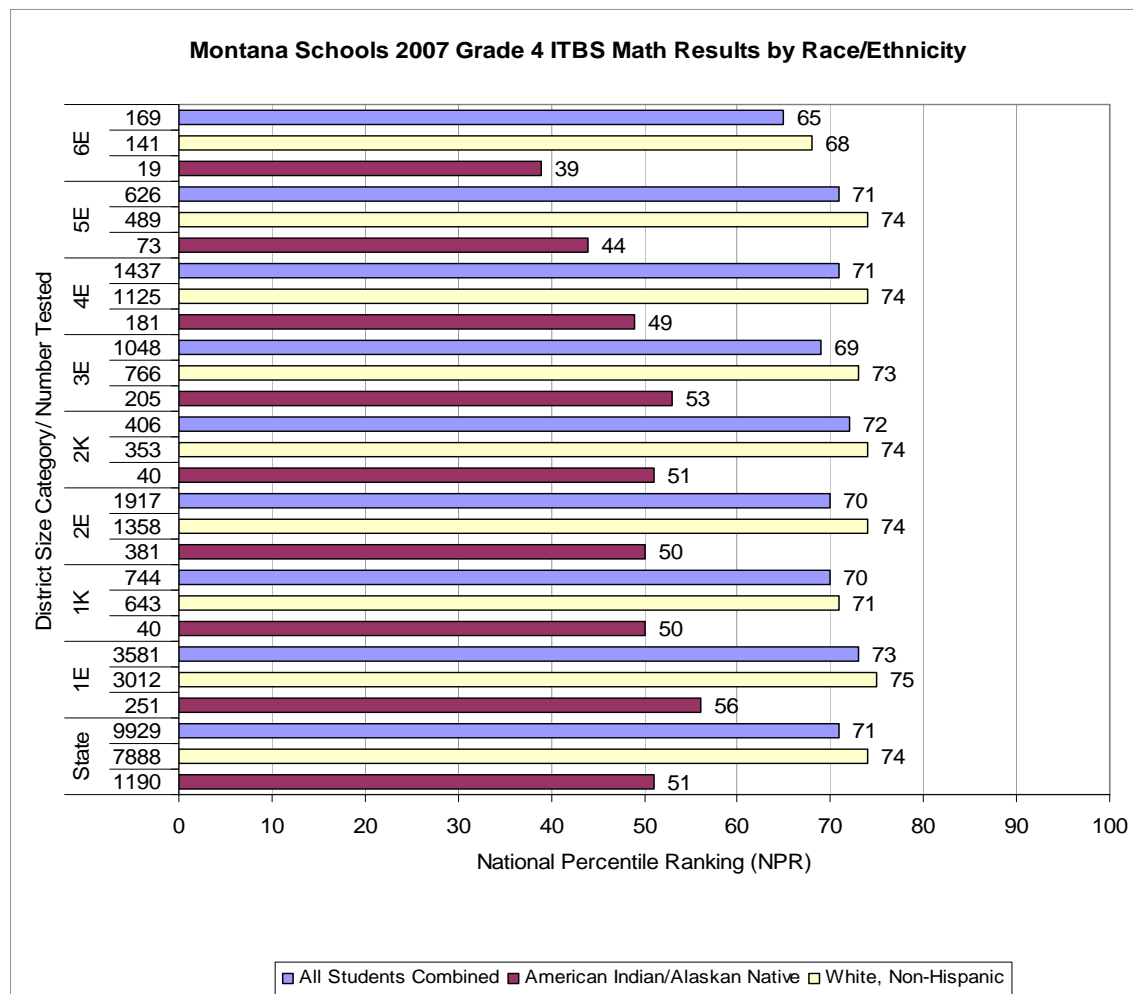
1. All students
 - The Math NPR for all Montana grade 4 students is 71%, one percentage point below 2006.
2. Students without disabilities
 - Statewide, the NPR for students without disabilities is 74%, one percentage point below 2006. That number is stable with most district size categories plus or minus 1-2 percentage points except district size category 6E with 66%.
3. Students with disabilities
 - Statewide, the NPR for students with disabilities is 42%, one percentage point below 2006. That number is somewhat stable with most district size categories plus or minus 1-6 percentage points except district size categories 3E with 32% and 6E where the number of students with disabilities is too small for comparisons.
4. Comparisons
 - Statewide, Montana students without disabilities scored 32 percentage points above students with disabilities, 74% and 42% respectively.

Chart 4.2 M



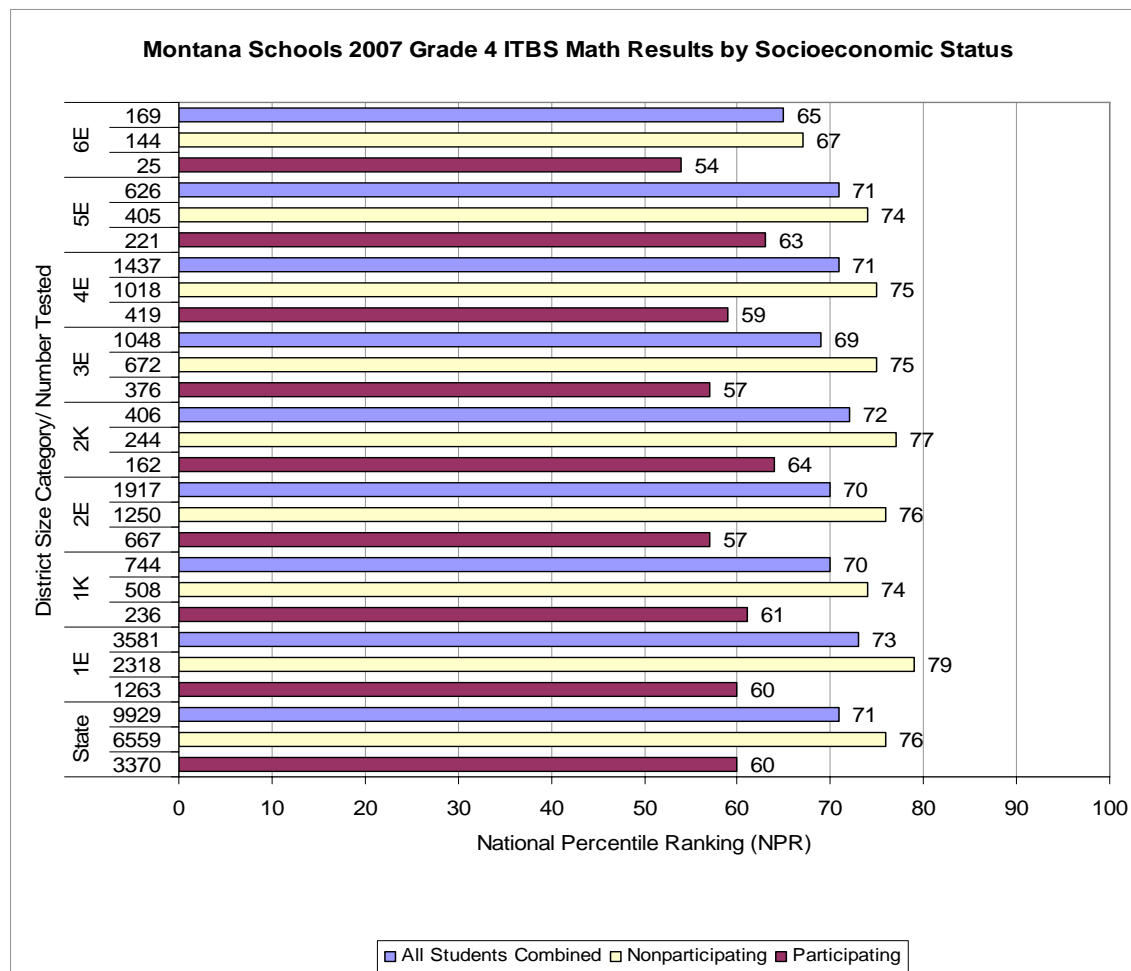
1. All students
 - The Math NPR for all Montana grade 4 students is 71%, one percentage points below 2006.
2. Female students
 - Statewide, the NPR for female students is the same as 2006, 71%. That number is stable with all district size categories plus or minus 2-6 percentage points.
3. Male students
 - Statewide, the NPR for male students is 72%, one percentage point below 2006. That number is stable with most district size categories plus or minus 1-4 percentage points except district size category 6E where the number of male students is too small for comparisons.
4. Comparisons
 - Statewide, male students scored one percentage point above female students, 72% and 71% respectively. That number is stable.

Chart 4.3 M



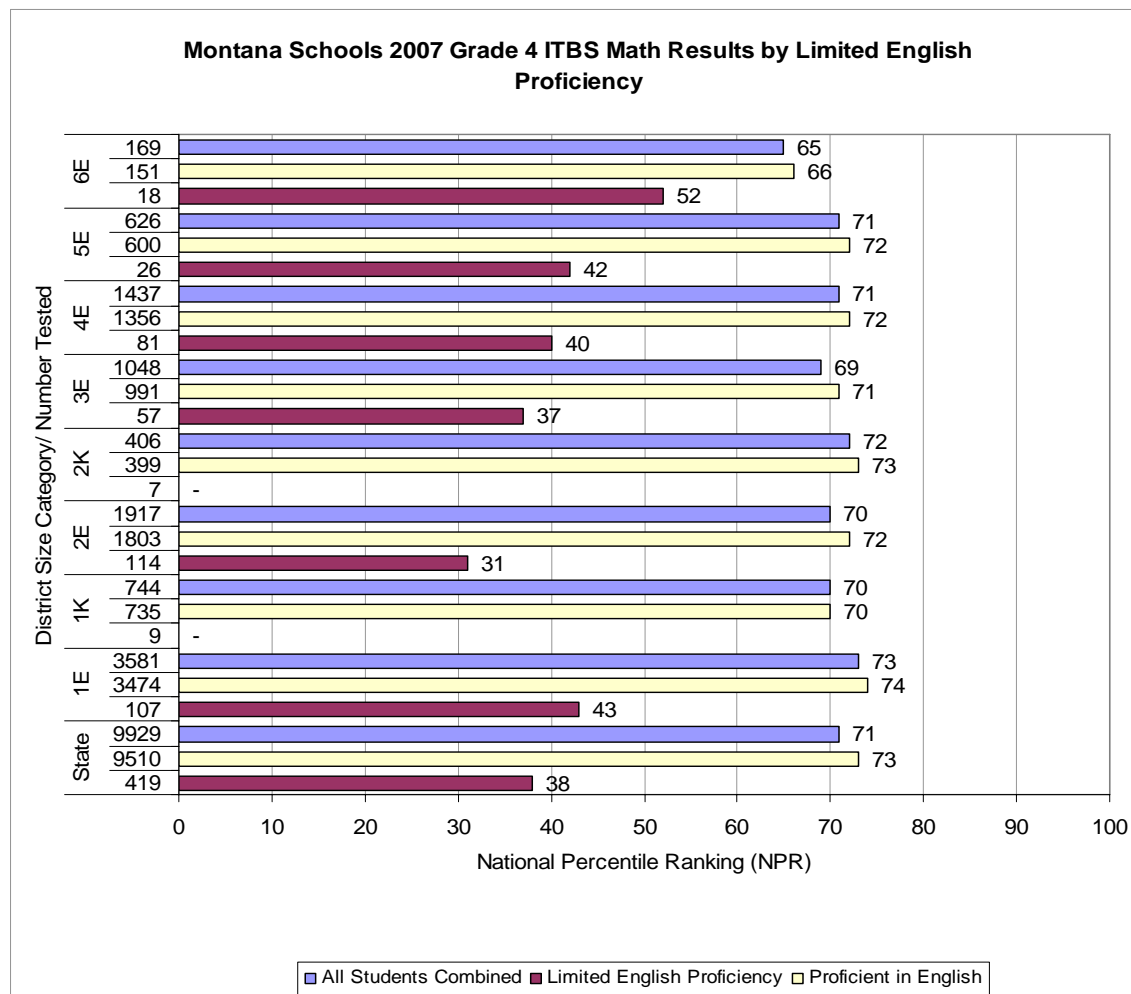
1. All students
 - The Math NPR for all Montana grade 4 students is 71%, one percentage point below 2006.
2. American Indian students
 - Statewide, the NPR for American Indian students is 51%, two percentage points below 2006. That number is somewhat stable with variations that occur where the number of American Indian students tested is small.
3. White students
 - Statewide, the NPR for White students tested is the same as in 2006, 74%. That number is stable with most district size categories plus or minus 1-6 percentage points.
4. Comparisons
 - Statewide, Montana White students scored 23 percentage points above American Indian students, 74% and 51% respectively. That number is stable.

Chart 4.4 M



1. All students
 - The Math NPR for all Montana grade 4 students is 71%, one percentage point below 2006.
2. Students participating in free/reduced lunch programs
 - Statewide, the NPR for students participating in free/reduced lunch programs is 60%, one percentage point below 2006. That number is stable with most district size categories plus or minus 1-6 percentage points.
3. Students not participating in free/reduced lunch programs
 - Statewide, the NPR for students not participating in free/reduced lunch programs is 76%, three percentage points below 2006. That number is stable with most district size categories plus or minus 1-3 percentage points except size category 6E with 67%.
4. Comparisons
 - Statewide, students not participating in free/reduced lunch programs scored 16 percentage points above students participating in free/reduced lunch programs, 76% and 60% respectively.

Chart 4.5 M



* To protect privacy, no results will be reported where the count of test takers is less than 10.

1. All students
 - The Math NPR for all Montana grade 4 students is 71%, one percentage point below 2006.
2. Students with limited English proficiency (LEP)
 - Statewide, the NPR for LEP students is 38%, two percentage points below 2006. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparisons
 - Statewide, all Montana students scored 33 percentage points higher than limited English proficient students, 71% and 38% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.